

REMARKS

In the Office Action, claims 1-47 were rejected. By this Reply and Amendment, claims 1, 12, 23, 38 and 44 have been amended, claims 2, 4, 5, 14, 25, 30, 31, 32 and 40 have been canceled without prejudice, and claims 1, 3, 6-13, 15-24, 26-29, 33-39 and 44-47 remain pending in the present application. All claim amendments are fully supported throughout the description and figures of the specification. No new matter has been added.

Claims 1-5, 8-9, 12-18, 23-30, 36, 38-41 and 44-47 were rejected under 35 USC 102(b) as anticipated by the Gilmer et al. reference, US Patent No.: 4,477,235. Applicants respectfully traverse this rejection, however independent claims 1, 12, 23, 38 and 44 have been amended to clarify aspects of the claim language and are believed patentable over the cited reference.

The Gilmer et al. reference describes a motor-pump unit for use in a well. The unit comprises a sealing module 7 having a shaft 12 with three sleeves 15, 16 and 17 held in three bearings 18, 19 and 20. The module also includes a mechanism for protecting a mechanical sealing fitting from solid particles. The protection mechanism comprises first and second fixed assemblies and two rotary deflectors. The first fixed assembly has three members including a fixing cone 43, a tube 46 and a flange 47. The fixing cone 43 is fixed to the bearing 19 by screws 44. The second fixed assembly has a generally bell-shaped assembly fixed to bearing 20 such that it fits over the flange 47 and the tube 46. The rotary deflectors include a lower deflector 51 screwed to the shaft and an upper deflector 54 also screwed to the shaft. (See column 3, lines 14-68).

Furthermore, Applicants respectfully submit several characterizations of the Gilmer et al. reference in the Office Action are believed incorrect. For example, fixing cone 43 is not an upper shaft seal elevated above a floor of the head section, as set forth in the Office Action. Additionally, item 39 in the Gilmer et al. reference is a bleed hole closed by a screw 38. Accordingly, item 39 can not serve as an abrasives drainage hole as suggested in the Office Action. Also, lower deflector 51 is not a rotatable shroud attached to the internal shaft proximate the stationary shroud, as stated in the Office Action. Furthermore, the Office Action included a

statement that the internal shaft in the Gilmer et al. reference is supported by at least one keyless journal bearing, and items 15, 16 and 17 are cited as supporting this statement. However, items 15, 16 and 17 are three sleeves used in bearings, and there is no indication or teaching that the bearings are keyless journal bearings. Accordingly, such characterizations should not be used in supporting the claim rejections.

The teachings of the Gilmer et al. reference fail to disclose or suggest numerous elements of the subject claims. For example, the reference does not disclose or suggest an abrasives exclusion mechanism comprising "a shaft seal raised above a floor of the head section by a seal body, a stationary shroud mounted to the seal body and extending above the shaft seal, and a rotatable shroud deployed above the stationary shroud and secured to the internal shaft" as recited in amended, independent claim 1. The reference also fails to disclose or suggest a motor protector having a head section and "a head section keyless journal bearing" as recited in amended, independent claim 12. Furthermore, the reference fails to disclose or suggest "locating a stand tube in the head section chamber and coupling the stand tube to the fluid port" in combination with "bending the stand tube" as recited in amended, independent claim 23. The reference also fails to disclose or suggest an abrasives exclusion mechanism comprising "a stationary shroud extending above the shaft seal, and a rotatable shroud deployed above the stationary shroud and adjacent the stationary shroud, the rotatable shroud being secured to an internal shaft" as recited in amended, independent claim 38. The Gilmer et al. reference further fails to disclose or suggest means for protecting "comprising a shaft seal raised above a floor of the head section chamber and at least one drain hole formed through an outer housing of the motor protector proximate the floor of the head section chamber" as recited in amended, independent claim 44. Accordingly, these independent claims are patentable over the Gilmer et al. reference.

Claims 3, 8-9, 13, 15-18, 24, 26-29, 36, 39, 41 and 45-47 ultimately depend from one of the independent claims discussed above. Accordingly, these dependent claims are patentable over the cited reference for the reasons provided above with respect to the corresponding independent claims as well as for unique subject matter recited in each of these dependent claims.

Claims 1-6, 9-31 and 37-47 were rejected under 35 USC 102(a) or (e) as anticipated by the Du et al. reference, US Publication No. 2002/0192090. Applicants respectfully traverse this rejection, however independent claims 1, 12, 23, 38 and 44 have been amended to clarify aspects of the claim language and are believed patentable over the cited reference.

The Du et al. reference describes a system and method for protecting a motor in a submersible pumping system. In one embodiment, a motor protector 16 includes a solids processing section 216 adjacent a pump 12. Additionally, a sand shield or seal protection section 218 is disposed adjacent section 216. The motor protector 16 also comprises a multi-orientable labyrinth section 220, a bellows section 222, a conventional labyrinth section 224, and a thrust bearing section 226. The sections are sealed via seal bodies each of which comprises a shaft seal 236 and a bearing 238. (See paragraphs 0081, 0082, 0083, 0084 and 0085).

Again, however, Applicants respectfully disagree with certain aspects of the characterization of this art in the Office Action. Just a few examples include the statement that the structure circled in the Examiner's "Figure in Note 2" is a drainage hole. (See Office Action, page 4). Applicants respectfully submit the structure circled is a blocked passage that does not function as a drain hole. Another example is the statement that the Du et al. reference bearing 238 is a keyless journal bearing. Nothing in the reference discloses or suggests the bearings are keyless journal bearings. Applicants further disagree with various other statements set forth in the Office Action and submit such statements should not be used to support the present rejection.

In any event, the teachings of the Du et al. reference fail to disclose or suggest numerous elements of the subject claims. For example, the reference does not disclose or suggest an abrasives exclusion mechanism comprising "a shaft seal raised above a floor of the head section by a seal body, a stationary shroud mounted to the seal body and extending above the shaft seal, and a rotatable shroud deployed above the stationary shroud and secured to the internal shaft" as recited in amended, independent claim 1. The reference also fails to disclose or suggest a motor protector having a head section and "a head section keyless journal bearing" as recited in amended, independent claim 12. Furthermore, the reference fails to disclose or suggest "locating a stand tube in the head section chamber and coupling the stand tube to the fluid port" in

combination with "bending the stand tube" as recited in amended, independent claim 23. The reference also fails to disclose or suggest an abrasives exclusion mechanism comprising "a stationary shroud extending above the shaft seal, and a rotatable shroud deployed above the stationary shroud and adjacent the stationary shroud, the rotatable shroud being secured to an internal shaft" as recited in amended, independent claim 38. The reference further fails to disclose or suggest means for protecting "comprising a shaft seal raised above a floor of the head section chamber and at least one drain hole formed through an outer housing of the motor protector proximate the floor of the head section chamber" as recited in amended, independent claim 44. Accordingly, these independent claims are patentable over the Du et al. reference.

Claims 3, 6, 9-11, 13, 15-22, 24, 26-29, 33-37, 39, 41-43 and 45-47 ultimately depend from one of the independent claims discussed above. Accordingly, these dependent claims are patentable over the cited reference for the reasons provided above with respect to the corresponding independent claims as well as for unique subject matter recited in each of these dependent claims.

Claims 6, 19-20, 31 and 42 were rejected under 35 USC 103(a) as obvious over the Gilmer et al. reference in view of the Turner reference, US Patent No. 5,367,214. Applicants respectfully traverse this rejection, however the remaining claims 6, 19-20 and 42 ultimately depend from one of the independent claims 1, 12 and 38. Accordingly, claims 6, 19-20 and 42 are patentable over the cited references for the reasons provided above with respect to the corresponding independent claims as well as for the unique subject matter recited in these dependent claims. The Turner reference provides no additional disclosure that would obviate the deficiencies of the Gilmer et al. reference.

Claims 11 and 22 were rejected under 35 USC 103(a) as obvious over the Gilmer et al. reference in view of the Turner reference and further in view of the Traylor reference, US Patent No. 6,595,280. Applicants respectfully traverse this rejection, however claims 11 and 22 ultimately depend from independent claims 1 and 12, respectively. Accordingly, claims 11 and 22 are patentable over the cited references for the reasons provided above with respect to the corresponding independent claims as well as for the unique subject matter recited in these

dependent claims. The Turner reference and the Traylor reference provide no additional disclosure that would obviate the deficiencies of the Gilmer et al. reference.

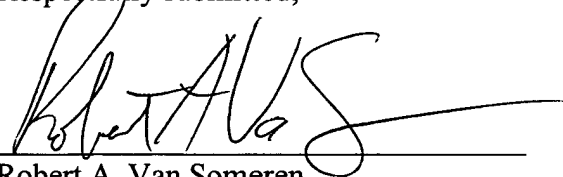
Claims 10, 21, 37 and 43 were rejected under 35 USC 103(a) as obvious over the Gilmer et al. reference in view of the Traylor reference. Applicants respectfully traverse this rejection, however claims 10, 21, 37 and 43 ultimately depend from one of the independent claims 1, 12, 23 and 38. Accordingly, claims 10, 21, 37 and 43 are patentable over the cited references for the reasons provided above with respect to the corresponding independent claims as well as for the unique subject matter recited in these dependent claims. The Traylor reference provides no additional disclosure that would obviate the deficiencies of the Gilmer et al. reference.

Claims 7 and 32-35 were rejected under 35 USC 103(a) as obvious over the Du et al. reference and optionally in view of the Poirier reference, US Patent No.: 5,699,859. Applicants respectfully traverse this rejection, however remaining claims 7 and 33-35 ultimately depend from independent claims 1 and 23, respectively. Accordingly, claims 7 and 33-35 are patentable over the cited references for the reasons provided above with respect to the corresponding independent claims as well as for the unique subject matter recited in these dependent claims. The Poirier reference provides no additional disclosure that would obviate the deficiencies of the Du et al. reference. Furthermore, Applicants respectfully submit the Poirier reference does not disclose a bent stand tube with a filter as stated on page 10 of the Office Action. The Poirier reference discloses a downwardly facing elbow 34 extending from the side of a valve body (see column 4, lines 4-24), and fails to disclose a stand tube let alone a bent stand tube.

Claims 7, 33 and 35 were rejected under 35 USC 103(a) as obvious over the Du et al. reference in view of the Gilmer et al. reference. Applicants respectfully traverse this rejection, however claims 7, 33 and 35 ultimately depend from independent claims 1 and 23. Accordingly, claims 7, 33 and 35 are patentable over the cited references for the reasons provided above with respect to the corresponding independent claims as well as for the unique subject matter recited in these dependent claims. The combination of the Du et al. and Gilmer et al. references provides no additional disclosure that would obviate the deficiencies of the individual references, as discussed above with respect to independent claims 1 and 23.

In view of the foregoing remarks, all pending claims are believed to be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Robert A. Van Someren', written over a horizontal line.

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